UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,085	11/21/2001	Radomir Mech	MS1-1031US	1282

22801	7590	12/10/2003

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EXAMINER
ARNOLD, ADAM

ART UNIT	PAPER NUMBER
2671	6

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/990,085		MECH, RADOMIR	
	Examiner		Art Unit	
	Adam Arnold		2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Double Patenting

1.   The nonstatutory double patenting rejection is based on a judicially created doctrine

grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA

1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to

overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this

application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal

disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37

CFR 3.73(b).

2.   Claims 1-3, 5, and 11-20 are provisionally rejected under the judicially created doctrine

of obviousness-type double patenting as being unpatentable over claims 1-3, 7, 10, 12 and 13 of

copending Application No. 09/991,526. Although the conflicting claims are not identical, they

are not patentably distinct from each other because the applicant's claims have a one to one

correspondence in limitations to the above claims found in Application No. 09/991,526.

Referring to claim 1, both this claim and claims 1 and 2 of Application No. 09/991,526 contain a method for rendering a scene comprising measuring a travel distance through a gaseous object, converting the gaseous object distance to a color component and blending the color component of the gaseous object with a color component of a non-gaseous object. This application does not refer to an alpha channel because the claims in this case are more general.

Referring to claim 2, the remarks presented above with respect to claim 1 apply equally to this claim. Although the other case does not refer to a linear distance, this is obvious in that determining a distance between objects is generally considered in a straight line.

Referring to claim 3, both this claim and claim 3 of Application No. 09/991,526 provide where the travel distance is measured by calculating the depth between the front and back faces of the gaseous object.

Referring to claim 5, both this claim and claim 7 of Application No. 09/991,526 provide for computer-executable instructions.

Referring to claim 11, both this claim and claim 12 of Application No. 09/991,526 provide where the graphical display system is a flight simulator.

Referring to claim 12, both this claim and claim 13 of Application No. 09/991,526 provide where the graphical display system is a game.

Referring to claim 13, both this claim and claim 10 of Application No. 09/991,526 provide for a display unit.

Referring to claim 14, the remarks presented above with respect to claim 1 apply equally to this claim.

Referring to claim 15, the remarks presented above with respect to claim 3 apply equally to this claim.

Referring to claim 16, the remarks presented above with respect to claim 13 apply equally to this claim.

Referring to claim 17, the remarks presented above with respect to claim 5 apply equally to this claim.

Referring to claim 18, the remarks presented above with respect to claim 1 apply equally to this claim.

Referring to claim 19, the remarks presented above with respect to claim 3 apply equally to this claim.

Referring to claim 20, the remarks presented above with respect to claim 1 apply equally to this claim.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim states "...wherein the converting the gaseous object distances to the color

component creates linear gaseous." The sentence ends with two adjectives and omits the direct

object. Whether this is a typographic error or the sentence is written as intended is unclear.

Because the meaning of the claim cannot be ascertained, it is rejected.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-13, 15-19 ~~and 21-24~~ are rejected under 35 U.S.C. 102(e) as being anticipated by

Hollis, U.S. Patent No. 6,580,430. Referring to claim 1, Hollis discloses a method for rendering

a visual scene (col. 3, line 60) comprising measuring a travel distance through a gaseous object

(col. 12, line 48), converting the gaseous object distance to a color component (col. 12, lines 46-

47), and blending the color component of the gaseous object with a color component of a non-

gaseous object to produce a pixel in the visual scene (col. 12, lines 44-45).

Referring to claim 2, Hollis discloses where the travel distances are linear distances (col.

10, lines 3-5).

Referring to claim 3, Hollis discloses where the travel distance is measured by calculating

a depth of the gaseous object between front and back faces of the gaseous object from a

reference point (col. 10, lines 4-5).

Referring to claim 4, regardless of the 112 rejection above, this claim has been interpreted to be "where the converting … creates a linear gaseous phenomena equation" as in the rejection to claim 15 shown below.

Referring to claim 5, Hollis discloses one or more computer-readable media comprising computer-executable instructions (col. 6, line 47).

Referring to claim 6, Hollis discloses where the blending of a color component from the gaseous object with the color component of a non-gaseous object generates a pixel with visual realism (col. 5, lines 43-55).

Referring to claim 7, Hollis discloses assigning a constant density to the gaseous object (col. 10, lines 2-3).

Referring to claim 8, the remarks presented with respect to claim 1, above, apply equally to this claim.

Referring to claim 9, Hollis discloses where the gas generator module is implemented as a software program layer operating in conjunction with computer hardware (col. 6, lines 45-52).

Referring to claim 10, Hollis discloses where the graphical display system is an interactive graphics machine (col. 6, line 41).

Referring to claim 11, Hollis discloses where the graphical display system might be a flight simulator (col. 3, line 21).

Referring to claim 12, Hollis discloses where the graphical display system is a game system (col. 6, line 49).

Referring to claim 13, Hollis discloses a display unit configured to display the final color to the user (col. 5, line 52).

Referring to claim 14, Hollis discloses using the distance as a variable (or attenuation factor), to determine the fog value as shown in claim 1 above.

Referring to claim 15, the remarks presented with respect to claim 3, above, apply equally to this claim.

Referring to claim 16, the remarks presented with respect to claim 13, above, apply equally to this claim.

Referring to claim 17, the remarks presented with respect to claim 5, above, apply equally to this claim.

Referring to claim 18, the remarks presented with respect to claim 1, above, apply equally to this claim.

Referring to claim 19, the remarks presented with respect to claim 3, above, apply equally to this claim.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollis. Hollis discloses determining a travel distance between the front and back face of an object (fog) as shown in the rejection to claim 3 above, and the standard means for determining this distance would be to subtract the distance between front and back points. Hollis does not discloses

initializing the pixel color value, although it can be assumed that this value is at some point initialized during the calculation in Hollis. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to initialize the pixel color value. One of ordinary skill in the art would have been motivated to do this in order to receive a meaningful value from the fog calculation.

Referring to claim 21, Hollis discloses where the front distance value and the back distance value are determined using a linear equation (col. 10, line 5).

Referring to claim 22, Hollis discloses where the travel distance is converted to the fog factor by solving a linear equation (col. 10, line 5).

Referring to claim 23, Hollis discloses where the travel distance is converted to the fog factor by solving an exponential equation (col. 10, line 17).

Referring to claim 24, Hollis discloses where the travel distance is converted to the fog factor by solving an exponential-squared equation (col. 10, line 18).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Adam Arnold** whose telephone number is **703-305-8413**. The

examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM

and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Technology Center 2600 Customer Service Office whose telephone

number is (703) 306-0377.

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600